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SECTION III.—FORECASTS.

FORECASTS AND WARNINGS FOR AUGUST, 1917.

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[Dated: Washington, Sept. 16, 1917.]

August of 1917 opened with unseasonably high temperatures in northeastern districts and these high temperatures continued until the afternoon of the 20th, when a perceptible cooling was brought about by the occurrence of rather general showers over New England and the Middle Atlantic States. The cooling induced by the showers was further augmented by the eastward drift of high No. I, Chart II.

The paths of 10 principal and 4 secondary LOWS have been charted (see Chart III). The majority of these LOWS originated in Alberta and moved eastward as shown. None of them presented characteristics worthy of mention, with the exception of the secondary depression marked IIIA. This low apparently had its origin in the southern end of primary LOW III, which on the evening of the 9th extended from the mouth of the St. Lawrence southward to the Carolinas with pressures in Virginia and eastern North Carolina of 29.82 to 29.84 inches.¹ There was at that time, however, no indication of an independent cyclonic circulation in the southern end of the trough-shaped primary LOW. On the following morning Nantucket Shoals Lightship reported a barometer reading of 29.34 inches and a wind of 64 miles an hour from the northeast. The near-by station of Nantucket, on the island of that name, reported a barometer reading of 29.62 inches and a northeast wind of 22 miles per hour. The report from Block Island, immediately to the westward, gave a barometer reading of 29.70 inches and a north wind of 22 miles an hour.

Four fishing vessels in the path of the storm after it left Nantucket were lost, and the total number of fishermen who perished is believed to be 41. After leaving the place where the fishing vessels were lost—about 50 miles south-southeast of Highland Light, Mass.—no further observation of the storm has come to hand. Evidently it dissipated before reaching the Grand Banks. It has been suggested that the storm was of tropical origin and that it escaped notice by reason of its very small diameter. An examination of the Nantucket barogram shows that pressure fell steadily from noon of August 8 until about 4 a. m. of the 10th, when there was a marked increase in the rate of fall which continued until about 10 a. m. on that date, the total fall in the four hours being 0.25 inch. The pressure then rose as rapidly as it had fallen and in about 10 hours had reached the level it had at the time the sharp fall began. The Nantucket curve is unlike that characteristic of a tropical cyclone, but it should be remembered that the station was not in the center of the cyclone. A similar case of a sharp fall in the barometer in connection with a cyclonic center over the continent is recalled. On October 21, 1904, the

barometer at Atlantic City, N. J., fell sharply 0.6 inch and quickly rose to its former level, the complete oscillation occupying about 20 hours. Nothing further was heard of this remarkable depression.

Less than half of the LOWS figured on Chart III, as originating west of the Mississippi, reached the Atlantic and about the same percentage of the HIGHS (see Chart II) of origin west of the Mississippi likewise failed to reach the Atlantic.

The only storm warnings of the month were issued in connection with the storm charted as No. III A., above described.

WARNINGS FROM OTHER DISTRICTS.

Chicago district.—No frost warnings were issued during August, 1917, except for extreme northwestern Wyoming on the 4th, and for the cranberry marshes of Wisconsin on the 9th, 27th, 28th, and 29th.—*H. J. Cox, district forecaster.*

New Orleans district.—Precipitation occurred with unusual frequency for the season of the year over the northern portion of the district and the greater part of it was covered in the forecasts. No storm warnings were issued and no storms occurred.—*I. M. Cline, district forecaster.*

Denver district.—The usual summer type of weather prevailed. No general storm developed in or passed over the district during the month, and a deficiency in precipitation was noted in localities. Decided departures from seasonable temperatures occurred mostly in connection with afternoon thunderstorms. No special warnings were issued, except for moderately high winds in localities in Colorado on one or two dates.—*F. H. Brandenburg, district forecaster.*

San Francisco district.—The weather conditions prevailing in this district during August, 1917, were normal. An area of high pressure prevailed in the North Pacific during the entire month while a trough of low pressure continued over California, and occasionally extending northward over the interior of Oregon and Washington. On the 7th, a portion of the northern high moved eastward through British Columbia and the northern Rocky Mountains region; but on other occasions when there was a tendency toward a movement inland, it was followed within 24 hours by a recession into the Pacific.

The depression over the interior of California was exceptionally sluggish throughout the month showing no tendency toward moving eastward, and not sufficient energy to develop a rain condition except on the 24th and 25th, when light showers occurred in the mountains in the extreme south.

Fire-weather warnings were issued in Washington, Oregon, and Idaho on August 8 and 31, and fairly well verified. Many forest fires prevailed in the northern section during the month, but the losses were not large. The fires are reported to have been incendiary.

No storm warning was issued and none was experienced.—*E. A. Beals.*

¹ Note added Oct. 10, 1917: Information recently received indicates that this cyclone had its origin east of the Virgin Islands, passed thence west-northwestward and eventually recurved to the northeast.—*A. J. Henry.*